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| 10/611,779      | 06/30/2003  | Andrew J. Carroll    | 020431.1304         | 1881             |

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i2 TECHNOLOGIES US, INC.  
ONE i2 PLACE, 11701 LUNA ROAD  
DALLAS, TX 75234

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| EXAMINER |
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LEE, PHILIP C

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| ART UNIT | PAPER NUMBER |
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2152

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09/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/611,779

Applicant(s)

CARROLL ET AL.

Examiner

Philip C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. This action is responsive to the amendment and remarks filed on June 28, 2007.
2. Claims 1-53 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 101*

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-17, 52, and 53 are rejected under 35 U.S.C. 101 because “A computer-implemented system” comprising a server and interfaces (i.e., software) does not include any functional structure of a system. A system (i.e., apparatus) comprising a server and interfaces (i.e., software) is considered as program per se, which is not one of the categories of statutory subject matter.
6. Claims 35-51 are rejected under 35 U.S.C. 101 because “Software for executing bulk data transfers” is considered as program per se, which is not one of the categories of statutory subject matter.

*Claim Rejections – 35 USC 112*

7. Claims 1-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim language in the following claims is not clearly understood:

i. As per claim 1, lines 21, 23-25, 28 and 30, it is uncertain if “the corresponding source and target data stores” refers to “the corresponding source data store” in line 8 and “the corresponding target data store” in line 15; Line 31, it is unclear if “any other persistent data store” refers to “any other persistent data store” in line 25.

ii. As per claim 18, lines 22, 24-25, 28, 30 and 31, they have the same problem as claims 1 above.

iii. As per claim 35, lines 23, 25-27, 30, 32 and 33, they have the same problems as claim 1 above.

iv. As per claim 52, lines 22, 24-26, 29, 31 and 32, they have the same problems as claim 1 above.

v. As per claim 53, lines 26, 28-30, 33, 35 and 36, they have the same problems as claim 1 above.

*Claim Rejections – 35 USC 102*

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8. Claims 1-2, 10-12, 18-19, 27-29, 35-36, 44-46 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram).
9. Jayaram was cited in the previous office action.
10. As per claims 1, 18, 35 and 52, Jayaram teaches the invention as claimed comprising:  
a data integration server coupled to one or more persistent data stores (fig. 1, col. 10, lines 56-63);  
one or more programmatic source interfaces (234, fig. 2; col. 10, lines 56-63; col. 12, lines 4-22), each being associated with a corresponding source data store, defined according to a common programmatic source interface specification (col. 11, lines 1-5), and exposed within the data integration server during a bulk data transfer in connection with an enterprise-level business workflow (abstract; col. 16, lines 1-12) to enable the data integration server to extract from the corresponding source data store one or more data entities for loading into any one or more selected target data stores during the bulk data transfer (col. 11, lines 5-11); and  
one or more programmatic target interfaces (270, fig. 2; col. 10, lines 56-63; col. 12, lines 31-33), each being associated with a corresponding target data store, defined according to a common programmatic target interface specification (col. 11, lines 5-11), and exposed within the data integration server during a bulk data transfer in connection with an enterprise-level business workflow (abstract) to enable the data integration server to load

into the corresponding target data store one or more data entities extracted from any one or more selected source data stores during the bulk data transfer (col. 11, lines 5-11); wherein each of the one or more programmatic source interfaces and the one or more programmatic target interfaces is operable to:

provide to the corresponding source and target data stores an abstraction of bulk data transfer operations within the data integration server such that custom code need not be developed in connection with the corresponding source and target data stores to enable bulk data transfers between the corresponding source and target data stores and any other persistent data store coupled with the data integration server (col. 12, lines 35-38); and

isolate from the data integration server specific details associated with the corresponding source and target data stores such that custom code need not be developed in connection with the data integration server to enable bulk data transfers between the corresponding source and target data stores and any other persistent data store coupled with the data integration server (col. 16, lines 42-52).

11. As per claims 2, 19, and 36, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach the data integration server is operable to expose its bulk data transfer operations as services to applications or other systems (col. 10, lines 42-49) within an enterprise-level infrastructure and to execute a bulk data transfer operation in response to a request from such an application or other system (col. 10, lines 58-63).

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12. As per claims 10, 27, and 44, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach a particular data store may be a source data store or a target data store for a particular bulk data transfer depending on whether data entities are extracted from the particular data store or loaded into the particular data store during the particular bulk data transfer (inherent in col. 2, lines 15-20).

13. As per claims 11, 28, and 45, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach loading data entities comprises inserting, updating, or deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a target system).

14. As per claims 12, 29, and 46, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach wherein each of the one or more programmatic source interfaces and the one or more programmatic target interfaces comprise: one or more resources representing data entities contained in the corresponding data store are defined (col. 14, lines 18-22); and the data integration server is operable to, in response to a request to execute a bulk data transfer involving one or more resources contained in one or more data stores (col. 10, lines 56-63), create each programmatic interface within which at least one of the resources is defined (col. 14, lines 26-28).

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15. Claims 16-17, 33-34, 50-51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram.

16. As per claims 16, 33, and 50, although Jayaram teaches one or more transformation interfaces exposed within the data integration server (col. 10, lines 64-67), each transformation interface: comprising one or more programmatic interfaces defined within the transformation interface (col. 16, lines 24-26); comprising custom transformation logic to be applied to data entities extracted from one or more source data stores in a bulk data transfer, using the one or more corresponding programmatic source interfaces (col. 16, lines 30-41), before the extracted data entities are loaded into one or more target data stores in the bulk data transfer, using the one or more corresponding programmatic target interfaces (col. 16, lines 30-41); and the data integration server is further operable to, in connection with creating the programmatic interfaces, create each transformation interface within which at least one of the programmatic interfaces is defined for application of the associated custom transformation logic in the bulk data transfer (col. 16, lines 24-41), however, Jayaram does not specifically teach isolating transformation logic from defined programmatic interfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention was made that the transformation logic can be coded separately from logical relationship (i.e., programmatic interfaces) because by doing so it would be easier to develop separate segments of codes in a complex software system.

17. As per claims 17, 34, and 51, Jayaram teaches the invention as claimed in claim 16, 33, and 50 above. Jayaram further teach a controller (inherently comprised) supported within the



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data integration server and operable to use a transformation interface in executing an individual bulk data transfer without using a commercially available Extract-Transform-Load (ETL) tool in connection with the bulk data transfer (col. 10, lines 24-67) (note that ETL is not used in the conversion engine).

18. As per claim 53, it is rejected for the same reason as claims 1, 2, 16, and 17 above.

19. Claims 3, 20 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Shannon et al, U.S. Patent Application Publication 2002/0046301 (hereinafter Shannon).

20. Shannon was cited in the previous office action.

21. As per claims 3, 20, and 37, Jayaram does not teach Java interfaces. Shannon teaches Java interfaces ([0031] and claim 5).

22. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Shannon because Shannon teaching of Java interfaces would provide a greater ease of integration by allowing data to be mapped from one application to another application.

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23. Claims 4-6, 8, 21-23, 25, 38-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter Casagrande).

24. Casagrande was cited in the previous office action.

25. As per claims 4, 21, and 38, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the corresponding programmatic interface to enable extraction of the data from or loading of the data into the data store (col. 14, lines 26-28); and for data extraction, as the programmatic source interface produces the data extracted from the data store, send the outgoing data; or for data loading, as the data arrives, send the incoming data to the programmatic target interface for loading into the data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard interface and industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67); receive a request from a client indicating that the client is extracting data from or loading data into a data store in accordance with the industry standard protocol (col. 3, lines 48-51); and send the outgoing data to the client in accordance with the industry standard protocol (col. 3, lines 1-4).

26. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande's teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

27. As per claims 5, 22, and 39, Jayaram and Casagrande teach the invention substantially as claimed in claims 4, 21, and 38 above. Jayaram further teach the data integration server allows a client supporting an industry standard protocol for bulk data transfers to perform bulk data transfers with respect to an existing data store using a programmatic interface whether or not the existing data store or an associated existing application itself supports bulk data transfers in accordance with the industry standard protocol (col. 10, lines 43-63; col. 11, lines 23-27).

28. As per claims 6, 23, and 40, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable extraction of the data from the corresponding source data store (col. 14, lines 26-28); and as the programmatic source interface produces the data extracted from the corresponding source data store, send the outgoing data (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration

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server that the FTP client is downloading a stream of data from the corresponding source data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the interface produces the stream of data extracted from the corresponding source data store, send the outgoing stream of data to the FTP client in accordance with FTP (fig. 4, col. 3, lines 1-4).

29. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

30. As per claims 8, 25, and 42, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable loading of the data into the corresponding source data store (col. 14, lines 26-28); and as the data arrives, send the incoming data to the programmatic target interface for loading into the corresponding target data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration server that the FTP client is uploading a stream of data to the corresponding target data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the stream of data arrives from the FTP client in

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accordance with FTP, send the outgoing stream of data into the data store (fig. 4, col. 3, lines 1-4) (i.e., the server of fig. 4 is interpreted as the FTP client and FTP client 12 and 24 of fig. 4 is the interpreted as the data store).

31. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

32. Claims 13-15, 30-32 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Walsh et al, U.S. Patent Application Publication 2003/0233249 (hereinafter Walsh).

33. Walsh was cited in the previous office action.

34. As per claims 13, 30, and 47, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Although Jayaram teach connect to data stores (fig. 1), whether or not the tool is compatible with these data stores, using the corresponding programmatic interfaces to extract data entities from and load data entities into these data stores (col. 11, lines 1-11), however, Jayaram does not teach ETL tool. Walsh teaches connect directly to data stores (fig. 1) with which the ETL tool is compatible to extract data entities directly from and load data entities directly into these data stores ([0092]).

35. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Walsh because Walsh's teaching of ETL tool would enhance the transfer mechanism in Jayaram's system by providing extraction of data from a data source, transformation of the data if necessary, consolidation of the data, and loading of the data into the target data store.

36. As per claims 14, 31, and 48, Jayaram and Walsh teach the invention as claimed in claims 13, 30, and 47 above. Although Jayaram teach the data integration server is operable to use programmatic interfaces to support compatibility between any corresponding data store (col. 2, lines 56-60), however, Jayaram and Walsh do not teach to support compatibility between any commercially available ETL tool. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to support ETL tool or any type of tools for the data stores in order to provide a data store independent system allowing data conversion from any source data stores into any target data stores.

37. As per claims 15, 32, and 49, Jayaram and Walsh teach the invention as claimed in claims 14, 31, and 48 above. Jayaram further teach the data integration server supports a controller operable to execute individual bulk data transfers using programmatic interfaces where either: an Extract-Transform-Load (ETL) tool is not present (col. 3, lines 16-24) (i.e., ETL is not present in the conversion engine); or an ETL tool is present but its capabilities are not needed to transform data entities extracted from one or more source data stores, using the one or more

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corresponding programmatic source interfaces, before the extracted data entities are loaded into one or more target data stores, using the one or more corresponding programmatic target interfaces, because physical database schemas of the source and target data stores are at least substantially similar.

38. Claims 7, 9, 24, 26, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Casagrande in view of Walsh.

39. As per claims 7, 9, 24, 26, 41, and 43, Jayaram and Casagrande teach the invention substantially as claimed in claims 6, 8, 23, 25, 40, and 42 above. Jayaram and Casagrande do not teach Extract-Transform-Load (ETL) tool. Walsh teaches a commercially available Extract-Transform-Load (ETL) tool supported within the data integration server ([0089], [0092]).

40. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram, Casagrande, and Walsh because Walsh's teaching of ETL tool would enhance the transfer mechanism in Jayaram's and Casagrande's systems by providing extraction of data from a data source, transformation of the data if necessary, consolidation of the data, and loading of the data into the target data store.

41. Applicant's arguments with respect to claims 1-53, filed 06/28/07, have been fully considered but they are not persuasive.

42. In the remark, applicant argued that:

(1) Jayaram fails to teach a computer-implemented system for executing bulk data transfers between persistent data stores in connection with an enterprise-level business workflow and in particular Jayaram fails to teach one or more programmatic source interfaces and one or more programmatic target interfaces.

43. In response to point (1), applicant's arguments, the recitation "a computer-implemented system for executing bulk data transfers between persistent data stores in connection with an enterprise-level business workflow" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). It is noted that Jayaram does teach the flow of business data between systems (320 and 310, fig. 3) in an enterprise (e.g., telecommunication or billing) (col. 16, lines 1-12) (i.e., executing bulk data transfers between persistent data stores in connection with an enterprise-level business workflow). Jayaram further teach comprising: source interfaces (programmatic source interfaces) such as data filter for formatting of source data (234, fig. 2; col. 12, lines 4-22) and instructions for pulling/receiving of source data (col. 10, lines 56-63), and target interfaces



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(programmatic target interfaces) such as final upload process (270, fig. 2; col. 12, lines 31-33) and instructions for uploading of data to target database (col. 10, lines 56-63).

44. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have

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questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

P.L.

  
BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER  
9/12/17